

## II. REMARKS

### Preliminary Remarks

This response is timely filed as it is accompanied by a petition for an extension of time to file in the first month and the requisite fee. Support for new claims 23-40 is found throughout the specification as originally. Now new matter is believed to have been introduced herein.

The applicants have noted the examiner's comments with respect to a certified copy of the German priority document. Said document shall be forwarded to the Patent Office under separate cover.

### Patentability Remarks

#### 35 U.S.C. §112, First Paragraph

Claims 1-4 and 6-8 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The claimed invention encompass any polynucleotide that is at least 70% identical to a polynucleotide encoding a polypeptide that contains the amino acid sequence of SEQ ID NO:2, a polynucleotide that encodes a polypeptide that is at least 70% identical to the amino acid sequence of SEQ ID NO:2, and a polynucleotide containing at least 15 successive nucleotides thereof. The specification, however, only provides the following representative species encompassed by the invention: an isolated polynucleotide consisting of SEQ ID NO:1. There is no disclosure of any particular structure to function/activity relationship in the single disclosed species. The specification also fails to describe additional representative species of these polynucleotides by any identifying structural characteristics or properties for

which no predictability of structure is apparent. Given this lack of additional representative species as encompassed by the claims, applicants have failed to sufficiently describe the claimed invention, in such full, clear, concise, and exact terms that a skilled artisan would recognize applicants were in possession of the claimed invention. Claims 2-4 and 6-8, which depend from claim 1, are also rejected because they do not correct the defect of claim 1.

Claims 1-4, 7 and 8 were also rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for an isolated polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or an isolated polynucleotide comprising SEQ ID NO:1, does not reasonably provide enablement for any other embodiment.

The nature and breadth of the claims encompass any polynucleotide that is at least 70% identical to a polynucleotide encoding a polypeptide that contains the amino acid sequence of SEQ ID NO:2, a polynucleotide that encodes a polypeptide that is at least 70% identical to the amino acid sequence of SEQ ID NO:2, and a polynucleotide containing at least 15 successive nucleotides thereof.

The specification provides guidance and examples for making an isolated polynucleotide encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or an isolated polynucleotide comprising SEQ ID NO:1. However, the specification does not teach the specific structural/catalytic amino acids and the structural motifs essential for protein activity/function which cannot be altered.

The applicants respectfully traverse. As amended herein and solely to expedite prosecution, the claims are no longer directed to polynucleotides that encode a polypeptide that is 70% identical to the polypeptide of SEQ ID:2. Further, the claims are not directed to a polynucleotide that is 70% identical to SEQ ID NO:1. In view of the foregoing, the

applicants request the withdrawal of the rejection based upon 35 U.S.C. §112, first paragraph and that the rejections not be extended to new claims 23-40.

35 U.S.C. §112, Second Paragraph

Claims 1-4, 7 and 8 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

In claim 1, the phrase "identical to the extent of at least 70% to a polynucleotide which codes for a polypeptide which comprises the amino acid sequence of SEQ ID NO:2" is vague and indefinite because the specific nucleotide sequence to which the claimed polynucleotide has 70% identity to is not known and not defined in the specification. Claims 2-4 and 7, which depend from claim 1, are also rejected because they do not correct the defect of claim 1.

In claim 2, the phrase "preferably recombinant" renders the claim vague and indefinite because it is not known if the claim polynucleotide is or is not further limited to a recombinant polynucleotide.

In claim 4 ii), the phrase "within the region of degeneration of the genetic code" renders the claim vague and indefinite because the meaning of the phrase is not known and not defined in the specification. In part (iii), the hybridization conditions are not recited and not known and thus render the claim vague and indefinite. In part (iv), the phrase "functionally neutral sense mutations" is vague and indefinite because the meaning of the phrase is not known and not defined in the specification.

In response, the applicants submit that these rejections are now moot. Specifically, the claims no longer recite the language referred to by the examiner. Therefore, the applicants respectfully request the withdrawal of the rejection based upon 35 U.S.C. §112, second, and that they not be extended to new claims 23-40.

Claims 1 and 2 are rejected under 35 U.S.C. § 102(b) as being anticipated by Eiglmeier et al. (GenBank Accession AL023591).

35 U.S.C. §102(b)

The examiner rejected claims 1 and 2 under 35 U.S.C. §102(b) over Eiglmeier et al. (GenBank Accession AL023591). The examiner alleged that the cited document teaches a polynucleotide that contains at least 15 successive nucleotides encoding SEQ ID NO:2 (see attached alignment). Thus, the reference teachings anticipate the claimed invention.

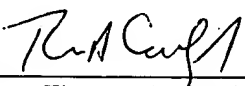
The examiner rejected claim 4 is rejected under 35 U.S.C. § 102(b) as being anticipated by Quax (Accession AAX29477). The examiner alleged that the cited document teaches a polynucleotide that is expected to hybridize to SEQ ID NO:1 since no stringent hybridization conditions have been recited.

The applicants submit that these rejections are now moot. Specifically, the claims, as amended herein are not anticipated by the cited documents. Therefore, the applicants request the withdrawal of the rejections based upon 35 U.S.C. §102(b) and that they not be extended to new claims 23-40.

**III. CONCLUSION**

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any point remains in issue which the examiner feels may be best resolved through a personal or telephone interview, the examiner is strongly urged to contact the undersigned at the telephone number listed below.

Respectfully submitted,  
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Enclosure: Appendix

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1-22 are deleted.

Claims 23-40 are added.

End of Appendix